Use of health care services by ethnic minorities in The Netherlands

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Published in:
European Journal of Public Health

Publication date:
2006

European Journal of Public Health, Vol. 16, No. 4, 388–393

doi:10.1093/eurpub/ckl040 Advance Access published on April 26, 2006

Use of health care services by ethnic minorities in The Netherlands: do patterns differ?

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Background: This article examines the nature of ethnic differences in health care utilisation by assessing patterns of use in addition to single service utilisation. **Methods:** Data were derived from the Second Dutch National Survey of General Practice. A nationally representative sample of 104 general practices participated in this survey. Data on health and health service utilisation were collected through face-to-face interviews. Based on a random sample per practice, a total of 12 699 Dutch-speaking people were interviewed, regardless of ethnic background. An additional study among a random sample of 1339 people from the four largest minority groups in The Netherlands was conducted. These four groups comprised people from Turkey, Surinam, Morocco, and The Netherlands Antilles. Multilevel analyses were performed to investigate ethnic differences in health care utilisation, adjusting for socio-economic status, health status, and level of urbanisation. **Results:** Differences in utilisation patterns were particularly marked for people with a Moroccan, Turkish, or Antillean background. Compared to the other groups, Surinamese were more likely to have had contact with any professional health care service. No evidence was found that the gate keeping role of general practitioners in The Netherlands functions less effectively among the ethnic minority groups as compared to the indigenous population. **Conclusion:** The analysis of patterns of utilisation proved to supply useful information concerning the relationship between ethnicity and use of health care services in addition to figures concerning single service use only.

Keywords: ethnicity, general practice, health service utilisation

Differences in health care utilisation between the ethnic minorities and the indigenous population have been reported frequently.[1,2] An adequate use of health care services is an important precondition for health. Therefore, it is important to examine whether ethnic differences in utilisation are an indication of problems in accessibility of health care services, or whether they reflect differences in need. One shortcoming in much of the literature concerning health care utilisation is that usually only one type of health service is studied at a time. Interdependencies between various levels of health services are largely neglected, ignoring the fact that using another may compensate for less use of one service. In order to gain more insight into potential substitution effects, Pescosolido[3] emphasises that health care utilisation should not be studied in isolation. This means that, in addition to utilisation of single services, patterns of use need to be considered. Patterns are referring to the use of different sources of care during the same period. In the Dutch health care system general practitioners (GPs) act as gatekeepers to more specialised care. This gatekeeping system is very familiar to the indigenous Dutch population. For all publicly insured patients and some privately insured patients more specialised treatment requires a referral from their GP. As a consequence of the income ceiling in eligibility for public insurance, most people are publicly insured during a part of their (working) life. This way most people are used to contact specialised care only after contacting their GP.[4] Minorities, however, often do not originate from a country with a gatekeeping system. Therefore, it is interesting to examine which place GPs occupy among minority groups. If ethnic minority groups appear to make more use of specialist care without seeing their GP, this might be an indication that GPs act to a lesser extent as gatekeeper among these groups as compared to the indigenous population. In our study we will try to assess the nature of ethnic differences in health care utilisation by examining whether differences in patterns of health care utilisation can be found. The main research questions in this article are as follows:

(i) Which patterns of health care utilisation are found in the major ethnic minority groups in The Netherlands?
(ii) Do ethnic minority groups differ in patterns of health care utilisation from each other and from the indigenous Dutch population?

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Methods

Population

Data were derived from the Second National Survey of General Practice, carried out in 2001.[5] A nationally representative sample of 104 GP practices participated in this survey. The total population of these practices consisted of ~385 500 people. The socio-demographic characteristics of all registered patients were assessed by means of a census. Ethnic background was indicated by the country of birth of the respondents and their parents. When at least one parent was born abroad, the individual was recorded as having a foreign background.[6] Data on health and health service utilisation were collected through face-to-face interviews. First, in a random sample per practice, a total of 12 699 Dutch-speaking people were interviewed, regardless of ethnic background. The response rate of this study was 64.5%. The response rate did not vary significantly for age or gender. An additional study among a random sample of 1339 people aged 18 years and over from the four largest ethnic minority groups in The Netherlands was conducted. These four groups comprised people from Turkey, Surinam, Morocco, and The Netherlands Antilles, who together represent about 6% of the population of The Netherlands. The content of the interviews among the ethnic minority groups was similar to the

interviews among the Dutch-speaking respondents. If necessary, people from the ethnic minority groups were interviewed in their own language. The response rate in all the ethnic minority groups was ~49%. No indications for a selective non-response were found concerning age and gender.

Measurements

This study of health care utilisation concerned any use of the following eight types of professional services in the year preceding the interview: GP, outpatient specialist, hospital admission, physiotherapist, other allied health professional care, ambulatory mental health care, homecare, and complementary care. In addition to the use of professional care, use of informal care was included. The following variables that have been found to be related to ethnic differences in health care utilisation were included in the analyses: health status, age, gender, level of urbanisation, and socio-economic position.[7] Health status was measured by the following two indicators: self-rated health, measured by a single-item question 'In general would you describe your health as: (i) excellent, (ii) very good, (iii) good, (iv) poor, or (v) very poor'[8] and the number of chronic conditions. The number of chronic conditions was estimated by asking participants whether they had suffered from one or more chronic conditions in the 12 months preceding the interview. Both indicators of health status were dichotomised for the analyses due to a skewed distribution (table 1). Level of urbanisation was categorised as follows: very highly urbanised, highly urbanised, moderately urbanised, slightly urbanised, and not urbanised.[9] Socio-economic position was indicated by type of insurance (public or private) and educational attainment (none, elementary school, high school, and college or university). Adjustment for educational attainment was achieved by introducing two dummies. The highest level (college or university) served as the reference category towards the lowest (none, elementary school) and middle level (high school).

Analyses

The analyses reported in this article are restricted to subjects aged over 18. Because respondents were approached through GP practices, the structure of the data is hierarchical. To account for this hierarchical structure multilevel analyses were performed, using Ml wiN.[10,11] First, a logistic multilevel analysis was performed to investigate whether the use of (single) health care services among the minority groups differed from the indigenous population. Second, on the basis of the self-reported utilisation rates of the single health care services, patterns of use were determined. The most frequently occurring combinations of use of single services among the minority groups were defined as patterns. These combinations are exclusive, which means that no other services than the ones mentioned in a pattern are used.

To investigate whether the minority groups resort to a different set of unique combinations of health care services compared to the indigenous population, a multinomial multilevel analysis was performed.[12] People who indicated that they used only GP services during the past year served as the reference category with regard to the dependent variable. People who did not use any health care were not included in these analyses. With respect to ethnicity, the indigenous population was taken as the reference category. The GP practice was interpreted as the highest level. Personal characteristics were defined at the lower level.

Table 1 Distribution of age, gender, health status, education, insurance status, and level of urbanisation across the ethnic groups

	Indigenous	Morocco	The Netherlands Antilles	Turkey	Surinam
n	7789	397	284	437	394
Age (mean)	49.8	36.1	39.3	36.5	44.7
Gender (%)					
Men	44.9	47.6	37.3	48.1	28.4
Perceived health (%)					
(Very) poor	17.6	38.2	32.0	34.8	31.5
Number of chronic conditions (%)					
≥1	65.7	57.4	59.0	59.7	68.3
Insurance type (%)					
Public	67.2	94.4	82.1	94.0	83.1
Education (%)					
None/elementary	17.8	47.9	17.0	45.6	23.1
High school	60.4	42.1	67.8	46.1	59.8
College/university	21.8	9.9	15.2	8.3	17.1
Level of urbanisation (%)					
Very high	14.2	62.5	50.0	55.6	70.6
High	18.4	11.8	19.4	12.6	18.5
Moderate	20.5	12.3	14.8	24.9	7.6
Slight	26.9	8.1	13.0	6.6	2.3
Not	20.0	5.3	2.8	0.2	1.0

Results

Background characteristics varied between the ethnic groups (table 1). All four minority groups were younger, reported poorer health, and were more likely to have public health insurance and to live in more highly urbanised areas than the indigenous population. The number of chronic conditions, gender distribution, and educational attainment showed a less consistent picture.

To assess the most frequently occurring patterns of health care services, first the utilisation figures for single services were examined. The Surinamese group appeared to be the only minority group where the percentage of those who had no contact with professional health care services at all was significantly lower than in the indigenous population. The use of single services appeared to differ between the ethnic groups (table 2). In general, the minority groups had significantly more contact with their GP and outpatient specialist. The hospital admission rates seemed quite similar for the indigenous population and the minority groups. The minority groups did not differ significantly from the indigenous population with regard to contact with ambulatory mental health care, homecare, and the use of informal care. With regard to the remaining services, such as other allied health professional care and complementary care, utilisation figures tend to be the highest among the indigenous population.

After examining the utilisation figures for single services, patterns of utilisation were assessed. The most frequently occurring exclusive combinations among the minority groups are shown in table 3. Clearly, ethnic differences in utilisation not only exist in the use of single services, but also with respect to combinations of different services used. Although the differences were not tested for significance, the likelihood of only using GP services appeared to be the highest among Moroccans (32.2%), whereas Antilleans seemed least likely to only have contacted a GP (21.8%). Furthermore, minority groups showed smaller percentages in contact rate with professional health care services without contacting their GP compared to the indigenous population. Particularly among Moroccans, Turks, and Surinamese this rate was almost half of the rate of the indigenous population. The likelihood of combining contact with a GP with an outpatient specialist or hospitalisation was higher among Antilleans, Turks, and Surinamese than among Moroccans and the indigenous population. In addition to this pattern, Surinamese people also appeared to have most frequently contacted physiotherapists or allied health professionals (11.7%). With respect to the remaining patterns of health care services ethnic differences were less pronounced.

Logistic multilevel analysis was performed to evaluate the number of people using professional care without reference to a GP (table 4). This turned out to be significantly lower among minority groups than in the indigenous population, except for Antilleans. Furthermore, we identified the most frequently occurring exclusive combinations of service use in the minority groups on the basis of the results in table 3. These combinations appeared to be centred on the following four types of services:

- GP care only.
- Outpatient specialist care (contact with a GP and outpatient specialist or hospital admission).
- Mental health care (contact with a GP and ambulatory mental health care and possibly other services).
- Allied health professional care (contact with a GP, outpatient specialist/hospital admission and physiotherapist or other allied health professional care).

A multinomial multilevel analysis was performed to investigate whether the frequency of these four patterns is the same in the minority groups as in the indigenous population. With regard to the pattern of specialist care it can be concluded that, compared to the use of GP care only, this specific pattern is more likely in the minority groups than the indigenous population. Among people with an Antillean or Turkish background the difference with the indigenous population is significant (respectively, OR = 2.11, 95% CI = 1.53–2.90; OR = 1.91, 95% CI = 1.46–2.52). With regard to the pattern of mental health care, relatively large ethnic differences emerged. Again this pattern was significantly more frequent in the Antillean group (OR = 1.61, 95% CI = 1.07–2.41), but the reverse was found in

Table 2 Adjusted use of (single) health care services during the past year across ethnic groups (OR and 95% CI)[a,b,c]

	Morocco	The Netherlands Antilles	Turkey	Surinam
No use of professional health care services	0.85 (0.60–1.20)	0.71 (0.47–1.09)	0.76 (0.54–1.07)	**0.61 (0.40–0.91)**
Contact GP	**1.56 (1.13–2.15)**	**1.46 (1.01–2.10)**	**1.55 (1.14–2.11)**	**1.90 (1.33–2.72)**
Contact outpatient specialist	1.26 (0.97–1.64)	**2.38 (1.77–3.21)**	**2.37 (1.83–3.06)**	**1.61 (1.25–2.06)**
Hospital admission	0.84 (0.53–1.33)	1.23 (0.78–1.95)	0.93 (0.61–1.43)	0.74 (0.46–1.17)
Contact physiotherapist	**0.53 (0.37–0.77)**	**0.64 (0.43–0.95)**	**0.70 (0.50–0.97)**	0.93 (0.68–1.27)
Contact other allied health professional care	**0.29 (0.16–0.56)**	0.82 (0.52–1.30)	**0.33 (0.19–0.58)**	0.65 (0.42–1.02)
Contact ambulatory mental health care	0.65 (0.42–1.01)	1.35 (0.90–2.03)	0.92 (0.62–1.36)	0.83 (0.54–1.29)
Contact homecare	0.46 (0.19–1.10)	1.59 (0.88–2.86)	0.95 (0.52–1.75)	0.68 (0.38–1.23)
Contact complementary/ alternative care	**0.31 (0.17–0.54)**	**0.46 (0.27–0.79)**	**0.47 (0.30–0.74)**	**0.41 (0.26–0.66)**
Informal care	0.79 (0.55–1.12)	0.66 (0.44–1.0)	0.86 (0.61–1.17)	0.83 (0.59–1.20)

a: Significant differences from the reference group in bold print ($P < 0.05$)
b: Odds ratios are adjusted for age, gender, education, insurance status, health status, and level of urbanisation
c: Reference group is the indigenous population

Table 3 Frequently occurring (combinations of) sources of health care contacted in the past year (%)

	Indigenous	Morocco	The Netherlands Antilles	Turkey	Surinam
n	7789	397	284	437	394
Only GP	25.0	32.2	21.8	27.7	27.4
Professional health care use without GP	6.8	3.5	4.6	3.2	3.0
GP + outpatient specialist/hospital admission	16.2	19.1	24.6	23.6	19.8
GP + physiotherapist/paramedic care	5.6	3.8	4.6	2.7	5.6
GP + mental health care	1.0	1.0	2.1	1.6	1.3
GP + informal care	1.3	1.3	1.8	1.4	2.0
GP + outpatient specialist/hospital admission + physiotherapist/other allied health professional care	7.7	6.5	7.0	6.2	11.7
GP + outpatient specialist/hospital admission + informal care	1.6	5.0	2.1	3.4	3.3
GP + outpatient specialist/hospital admission + mental health care	1.7	2.0	4.9	1.8	1.8

Table 4 Patterns of health care services use (multinomial, multilevel analyses, odds ratio, and 95% CI)[a,b]

	Morocco	The Netherlands Antilles	Turkey	Surinam
Binary response variable				
Users of care without GP[c]	**0.54 (0.30–0.98)**	0.74 (0.41–1.33)	**0.49 (0.27–0.87)**	**0.46 (0.25–0.86)**
Multinomial response variable				
GP + outpatient specialist care/hospital admission[c,d]	1.25 (0.93–1.68)	**2.11 (1.53–2.90)**	**1.91 (1.46–2.52)**	1.20 (0.90–1.61)
GP + mental health care[c,d]	**0.42 (0.27–0.66)**	**1.61 (1.07–2.41)**	0.86 (0.58–1.26)	0.70 (0.46–1.07)
GP + outpatient specialist/hospital admission + allied health professional care[c,d]	**0.55 (0.34–0.88)**	0.96 (0.58–1.59)	0.74 (0.47–1.15)	0.97 (0.65–1.43)

a: Significant differences from the reference group are printed bold ($P < 0.05$)
b: Odds ratios are adjusted for age, gender, education, insurance status, health status, and level of urbanisation
c: Reference group is the indigenous population
d: Users of GP services only are the reference category in the dependent variable

the Moroccan group (OR = 0.42, 95% CI = 0.27–0.66). The fourth pattern concerned the combination of specialist care and allied health professional care. This pattern appeared to be less frequent in the ethnic minority groups than in the indigenous population. Only among Moroccans this difference was significant (OR = 0.55, 95% CI = 0.34–0.88).

Multilevel analysis showed that the occurrence of patterns is clustered at the GP level. The strongest clustering effect at the GP level was found in relation to the patterns of specialist care and mental health (not shown). This means that the likelihood of contact with mental health care and specialist care is most strongly dependent on the GP. Practices that refer more patients to specialist care were also more likely to refer more patients to mental health care.

Discussion

The aim of our study was to assess which patterns of health care utilisation are found in the major minority groups and, subsequently, to examine whether these utilisation patterns differ between the ethnic groups studied. The most frequently occurring patterns of service use appeared to be centred on the following types of services: GP care only, outpatient specialist care, mental health care, and allied health professional care. Multilevel analysis showed that the occurrence of these patterns was clustered at GP level, indicating that the occurrence of specific patterns of utilisation is partly dependent on the GP. In keeping with previous research concerning the utilisation of single health care services, the minority groups varied in patterns of utilisation.[1,2] Compared to the indigenous population, significant differences in utilisation patterns were especially marked for people with a Moroccan, Turkish, or Antillean background. Moroccans tend to show lower utilisation patterns, whereas Turks and Antilleans, in general, showed higher or similar rates as the indigenous population. Differences in age, gender, health status, type of insurance, educational attainment, and level of urbanisation could not account for these differences. Consistent with previous research, our study confirmed the high utilisation of general practice services among minority ethnic group relative to the indigenous population. However, in contrast to other studies this higher use of GP care is not combined with a lower use of specialist care.[1,2,13] This might be explained by methodological differences possibly influencing the results. Important differences between our study and other studies are the facts that in our study respondents were older,[1,2,13] ethnicity was based on country of birth instead of self-definition,[1,13] and the survey was nationally representative and not local.[2]

The general picture that emerges from our study indicates that, except for Surinamese, the likelihood of contact with any professional health care services at all was equal among

minorities and the indigenous population. Compared to the other groups, Surinamese were most likely to contact a professional health care service. Moreover, no evidence was found that minority groups make more use of professional health care services while bypassing their GP. In contrast to the expectations beforehand, the minority groups made even significantly less use of professional services without contacting a GP than the indigenous population, except for Antilleans. This indicates that the gatekeeping function of the GP is even more in evidence among the minority groups. Furthermore, with respect to outpatient specialist care, no indication for a substitution effect is found. The higher contact rate with their GP among the minority groups does not seem to be attributable to a substitution for specialised care.

Interpretation of the results is limited by the fact that our study only concerned adults aged at least 18 years. Furthermore, only minority groups from the four largest groups in The Netherlands were included. Given the differences found between the minority groups, this implies that the results do not necessarily apply to minorities with a different ethnic background. Moreover, little attention has been paid to the heterogeneity within the minority groups. For instance, no distinction was made between immigrants from the first and second generation. It is very likely that patterns of health care utilisation not only differ between ethnic groups but also within these groups. We were unable to make a distinction between contact with a medical specialist at the emergency room (ER) or in another setting. Although within the Dutch health care system visits to the ER should be preceded by a GP's referral, access to the ER is relatively easy without first contacting a GP. In addition to analysing contacts with professional services without having contacted a GP, it would be interesting to examine whether ER visits without reference to a GP are related to ethnicity. If ER visits also turn out to be lower among minority groups than within the indigenous population, this would support our conclusion concerning the gatekeeping function of GPs. It must furthermore be emphasised that the results are only based on figures concerning use of services during the past year and are not referring to the frequency of use. A final limitation that should be mentioned is the lack of cross-cultural validated questionnaires. Although there are some indications that self-reporting provides a valid estimation of ethnic differences in use of health care, caution is needed while interpreting the results.[14] In order to restrict bias as much as possible the comprehensibility and acceptability of our questionnaire was tested in a pilot.

In conclusion, the analysis of patterns of utilisation proved to supply useful information about the relationship between ethnicity and use of health care services in addition to figures concerning single service use only. Support is found for the assumption of Pescosolido that patterns of utilisation need to be considered in order to provide more insight into the nature of ethnic differences in use of care.[4] Although our study was performed within the Dutch health care system, characterised by GPs as gatekeeper, taking patterns of use into account will in general be of value. During the past decades in many European countries the number of immigrants significantly increased. Health care services in countries with a strong position for the GP in primary care, like The Netherlands, might differ in accessibility for ethnic minorities from countries with another health care system. Taking patterns of use into account will provide more insight into the way ethnic minorities make use of the local health care system. On the basis of single services only, for instance, no distinction can be made between people who only contact their GP and people who also used additional services. All minority groups were found to contact a GP more frequently than the indigenous population, but figures concerning the utilisation of GP services only revealed that this pattern was least apparent for Antilleans. Though our results indicate that ethnic differences in health care utilisation exist, our study does not provide explanations for these variations between minority groups. The high level of GP consultations combined with a relatively low use of specific combinations of health care services among Moroccans may indicate particular problems of access to health services for this group. Possibly a poor initial consultation necessitates further visits to the GP and complicates the referral process. The disparity in use of health care services among Moroccans and the other minority groups is therefore cause for concern. This reinforces the need to study health care utilisation by minority groups separately.

Acknowledgement

This study was financed by a grant from The Netherlands Organisation for Scientific Research, Social Cohesion Programme; subprogramme, the Dutch Multicultural and Pluriform Society (MPS) (grant 261-98-618).

Key points

- This article focuses on differences in patterns of health care use between the ethnic minority groups and the indigenous population.
- Particularly people with a Moroccan, Turkish, or Antillean background have different patterns of use as compared to the indigenous population.
- The gatekeeping function of GPs, although not common in the countries of origin, seems even more evident among the minority groups than among the indigenous population.
- The higher contact rate with the GP among the minority groups is not attributable to a substitute by less specialised care.
- Taking patterns of use into account provides better insight into the way ethnic minorities make use of the local health care system.

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Received 15 March 2005, accepted 7 December 2005